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DRUG DISCOVERY

FDA approved drugs – April 2013

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1. SITAVIG (ACYCLOVIR) BUCCAL TABLETS

1.1. Company
BioAlliance Pharma; Approved in April 2013

1.2. Treatment Area
Recurrent herpes labialis

1.3. General Information
Sitavig (acyclovir) is an antiviral buccal tablet formulated on the company's proprietary Lauriad muco-adhesive technology. It is specifically indicated for the treatment of recurrent herpes labialis in immunocompetent adults. It is supplied as a tablet for oral administration. One Sitavig 50 mg buccal tablet should be applied as a single dose to the upper gum region and held in place with a slight pressure over the upper lip for 30 seconds to ensure adhesion. The tablet should be applied within one hour after the onset of symptoms and before the appearance of any signs of herpes labialis lesions.

1.4. Mechanism of Action
Sitavig (Acyclovir) is a synthetic purine nucleoside analogue active against herpes viruses. Following conversion into a triphosphate, acyclovir triphosphate inhibits replication of herpes viral DNA by competing with nucleotides for binding to the viral DNA polymerase and by incorporation into and termination of the growing viral DNA chain. The cellular thymidine kinase of normal, uninfected cells does not use acyclovir effectively as a substrate; hence toxicity to mammalian host cells is low.

1.5. Side Effects
Adverse events associated with the use of Sitavig include: headache, application site pain

2. INVOKANA (CANAGLIFLOZIN)

2.1. Company
Janssen Pharmaceuticals; Approved in April 2013

2.2. Treatment Area
Type II diabetes mellitus

2.3. General Information
Invokana (canagliflozin) is specifically indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus. It is supplied as tablets for oral administration. The recommended starting dose of Invokana is 100 mg once daily, taken before the first meal of the day. In patients tolerating Invokana 100 mg once daily who have an eGFR of 60 mL/min/1.73 m2 or greater and require additional glycemic control, the dose can be increased to 300 mg once daily.

2.4. Mechanism of Action
Invokana (canagliflozin) is a sodium-glucose co-transporter 2 (SGLT2) inhibitor. Sodium-glucose co-transporter 2 (SGLT2), expressed in the proximal renal tubules, is responsible for the majority of the reabsorption of filtered glucose from the tubular lumen. It is an inhibitor of SGLT2. By inhibiting SGLT2, canagliflozin reduces reabsorption of filtered glucose and lowers the renal threshold for glucose (RTG), and thereby increases urinary glucose excretion.

2.5. Side Effects
Adverse events associated with the use of Invokana include: female genital mycotic infections, urinary tract infection, and increased urination

3. QUARTETTE (LEVONORGESTREL/ETHINYL ESTRADIOL AND ETHINYL ESTRADIOL)

3.1. Company
Teva Pharmaceutical; Approved in April 2013

3.2. Treatment Area
Contraception

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3.3. General Information
Quartette is specifically indicated for use by females of reproductive age to prevent pregnancy. It is supplied as ascending dose tablets for oral administration. It should be administered once a day by mouth at the same time every day for 91 days. To achieve maximum contraceptive effectiveness, Quartette must be taken exactly as directed and at intervals not exceeding 24 hours.

3.4. Mechanism of Action
Quarette is an ascending-dose, extended regimen oral contraceptive comprised of levonorgestrel/ethinyl estradiol and ethinyl estradiol. Levonorgestrel is a progestin and ethinyl estradiol is an estrogen. It prevents contraception primarily by suppressing ovulation. It may also induce cervical mucus changes that inhibit sperm penetration and endometrial changes that reduce the likelihood of implantation.

3.5. Side Effects
Adverse events associated with the use of Quartette include: headaches, heavy/irregular vaginal bleeding, nausea/vomiting, acne, dysmenorrheal, weight increased, mood changes, anxiety/panic attack, breast pain, migraines

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